REMARKS

In response to the Office Action mailed May 11, 2009, Applicant respectfully requests reconsideration. To further the prosecution of this application, each of the rejections set forth in the Office Action has been carefully considered and is addressed below. The application as presented is believed to be in condition for allowance.

I. The Finality of the Office Action is Improper

The Office Action Summary indicates that the Office Action is final. However, the finality of the Office Action is improper, as the Examiner has instituted a new grounds of rejection that was not necessitated by any amendment made by Applicant. MPEP §706.07(a) states that, "second or subsequent actions on the merits shall be final, **except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment, nor based on information submitted in an information disclosure statement...."**

The examiner has instituted a new grounds of rejection, as Nakayama (2005/0005066) is relied on as prior art for the first time during the prosecution of this application. This new grounds of rejection **was not** necessitated by any claim amendments, as the only amendments made in the previous response incorporated previously-pending dependent claims into their respective independent claims.

In Applicant's response to the previous Office Action, Applicant amended each of independent claims 1, 21, 41, 63, 80, 97. However, these amendments merely incorporated a previously-pending dependent claim into each of the independent claims and, as such, did not necessitate any new rejection.

In particular, claim 1 was amended to incorporate claim 13 (which depended directly from claim 1), claim 21 was amended to incorporate claim 33 (which depended directly from claim 21), claim 41 was amended to incorporate claim 55 (which depended directly from claim 41), claim 63 was amended to incorporate claim 72 (which depended directly from claim 55), claim 80 was amended to incorporate claim 89 (which depended directly from claim 80), and claim 97 was amended to incorporate claim 109 (which depended directly from 97).

In the previous Office Action, the Examiner rejected each of claims 13, 33, 55, 72, 89, 109 under 35 U.S.C. §102(b) as purportedly being unpatentable over Heil (6,173,374). The Examiner has now changed this rejection to a rejection under 35 U.S.C. §103(a) relying on a combination of Heil and Nakayama. As this constitutes a new grounds of rejection that was not necessitated by any amendment made by Applicant, it is respectfully requested that the finality of the Office Action be withdrawn, and that the Office Action be treated as a non-final Office Action.

II. Prior Art Rejections

The Office Action rejects claims 1-12, 14-32, 34-54, 56-67, 69-71, 73-84, 86-88, 90-104, and 106-108 and 110-116 under 35 U.S.C. §103(a) as purportedly being obvious over Heil and Nakayama, and rejects claims 68, 85, and 105 under 35 U.S.C. §103(a) as purportedly being obvious over Heil and Nakayama in view of Iskiyan (5,428,796). Applicant respectfully traverses each of these rejections.

A. Independent Claims 1, 21, and 41 and Dependent Claims

Each of independent claims 1, 21, and 41 includes limitations that relate to the unit of data being accessible in the storage environment by a content address that is based, at least in part, upon at least a portion of the content of the unit of data, and determining on which of the plurality of storage clusters the unit of data is stored based on the content address.

The Office Action concedes that Heil fails to disclose or suggest this limitation, but asserts that Nakayama discloses "storing based on the content address of the unit of data," at ¶0085 (*see* Office Action, page 3).

Initially, Applicant notes that none of independent claims 1, 21, and 41 is relates to "storing based on the content address." Rather, each of independent claims 1, 21, and 41 relates to determining on which of a plurality of storage clusters a unit of data is stored based on its content address. Thus, the statement in the Office Action that Nakyama discloses "storing based on the content address of the unit of data" is not relevant to any limitation of independent claim 1, 21, or 41.

Moreover, Nakayama does not disclose or suggest the use of a content addresses to identify units of data. As recited in each of claims 1, 21, and 41, a content address is and identifier for a unit of data, "that is based, at least in part, upon at least a portion of the content of the unit of data." Applicant's specification also defines the term "content address" as an identifier that is "generated based on the content of the data itself (*see* Specification, page 16, lines 11-12)." Nakayama fails to disclose the use of such a content address. While ¶0085 discloses the use of disk addresses used in storing data in a cache memory, the address used to identify certain data in the system of Nakayama is not generated based upon the content of the data.

Additionally, even if the disk address in Nakayama is somehow considered to be a content address (though it clearly is not), Nakayama does not disclose determining on which of a plurality of storage clusters a unit of data is stored based on this address. That is, the system of Nakayama comprises a local disk writing unit 101 coupled to a local disk device group 30 and a remote disk writing unit 102 coupled to a remote disk system 40 (Nakayama, Figure 2). The system of Nakayama does not determine whether to store data to the local disk device group 30 or the remote disk system 40 based on the address. Rather, in ¶0085, Nakayama discloses that data is always stored on both the local disk device group 30 and the remote disk system 40. In particular, Nakayama states that "when the data writing operation to the local disk is completed, the remote disk writing unit 102 transmits data received from the host computer 1 via the SAN 3 to the remote disk system 40 so as to store this transmitted data into the cache memory 56 [in the remote disk system]. After the address of the stored data in the cache memory 56 of the remote disk system 40 is converted by the disk control unit 54, the address-converted data is stored in the remote disk."

Thus, Nakayama does not determine whether to store data from the host on the local disk device group or the remote disk system based on the address, but rather always stores data on both the local disk device group and the remote disk system.

As should be appreciated from the foregoing, each of claims 1, 21, and 41 patentably distinguishes over the asserted combination of Heil and Nakayama. Accordingly, it is respectfully requested that the rejections of these claims under §103(a) be withdrawn.

Claims 2-12 and 14-20 depend from claim 1, claims 22-32 and 34-40 depend from claim 21, and claims 42-54 and 56-52 depend from claim 41. Each of these dependent claims is patentable

for at least the same reasons as its respective independent claim. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

B. Independent Claims 63, 80, and 97 and Dependent Claims

Each of independent claims 63, 80, and 97 includes limitations that relate to the unit of data being accessible in the storage environment by a content address that is based, at least in part, upon at least a portion of the content of the unit of data, and selecting one of the plurality of storage clusters to store the unit of data based on the content address.

As should be clear from the discussion above, neither Heil and Nakayama discloses or suggests identifying units of data using content addresses or selecting one of the plurality of storage clusters to store the unit of data based on its content address. Thus, each of independent claims 63, 80, and 97 patentably distinguishes over the asserted combination Heil and Nakayama, and it is respectfully requested that the rejection of each of these claims be withdrawn.

Claims 64-71 and 73-79 depend from claim 63, claims 81-88 and 90-96 depend from claim 80, and claims 98-108 and 110-116 depend from claim 97. Each of these dependent claims is patentable for at least the same reasons as its respective independent claim. Accordingly, it is respectfully requested that the rejections of these claims be withdrawn.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825 under Docket No. E0295.70199US00 from which the undersigned is authorized to draw.

Dated: August 11, 2009

Respectfully submitted,

By 

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